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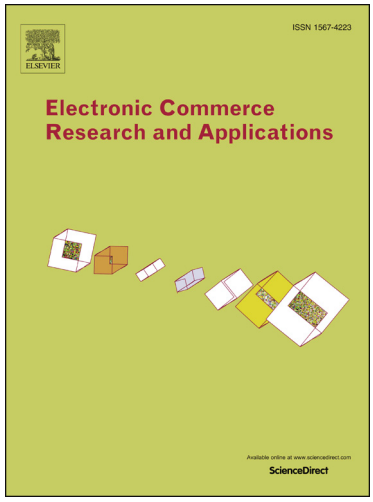

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Xuebing Dong, Hongbo Li

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DOES ONLINE MEDIA SEQUENCE MATTER IN PRODUCT MARKETING?

Xuebing Dong and Hongbo Li (corresponding author)

School of Management, Shanghai University
99 Shangda Road, Baoshan District, Shanghai, P.R. China
dongxuebing116@sina.com, hongbo_li@t.shu.edu.cn

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ABSTRACT

Recently, integrating multiple online media to achieve synergistic effects has become more and more popular, and this is primarily driven by emerging online interactive media. Scholars and practitioners are interested in the relationship between online media sequence and consumer persuasion. However, how online media sequence influences consumer persuasion is not fully understood. Previous studies have had inconsistent conclusions about media sequence on this relationship. Using the *media congruence hypothesis* and primacy effects as our theoretical foundation, we investigate how consumer persuasion, mainly reflected as message acceptance and message responses, is influenced by different types of online media sequence and product types. The results show that the interaction between them type affects consumer persuasion. For search products, the sequence of first online broadcast media and then online interactive media makes consumers be higher in message acceptance and message responses. For experience products though, online interactive media then online broadcast media make consumers prone to higher message acceptance and message responses. Message acceptance mediates the effect of online media sequence on message responses also. This study contributes to the empirical research on online media synergy and integrated marketing communications, and has practical implications that we discuss also.

Keywords: Empirical research; media congruence hypothesis; message acceptance; message response; moderation; online broadcast media; online interactive media; online media sequence

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1. INTRODUCTION

Previous studies on integrated marketing communications have elicited extensive discussions over how the synergistic effects of multiple media induce consumers to buy (Lim et al., 2015; Lin et al., 2013; Vandeberg et al., 2015). Given that the online media exert a significant effect on consumers, marketers should increasingly cater for consumers who are users of online multiple media (Pantano and Viassone, 2015). Online integrated marketing communications that are available to consumers are of two strikingly different types (Dong et al., 2017). The first type is traditional online media, mainly in the form of banner advertisement and websites, labeled as *online broadcast media* (OBM). The second type is in the form of social media like blogs, micro blogs and *social network services* (SNS), labeled as *online interactive media* (OIM). Consumers are users of both online media (Srivastava, 2013; Zhang et al., 2015).

Online media synergy can be found in two kinds of media consumption: *simultaneous synergy* and *sequential synergy* (Dong et al., 2017; Zhang et al., 2015). Previous studies show that using multiple media to process information distracts consumers' attention and further attenuates the effectiveness of message acceptance (Angell et al., 2016; Kazakova et al., 2016). Therefore, the effectiveness of multitasking may be negative: the combining effect of multiple media is less than the sum of the effect of individual media. Existence of sequential synergy is reasonable. For consumers, it is common for them to acquire information from different media, such as getting attention via exposure to online banners, which motivates their discussions with other consumers (Lim et al., 2015; Voorveld et al., 2012). For enterprises, it is difficult to release information on different media at the same time due to the difficulties in managing emergencies that occur with multiple media. For online integrated marketing communications, sequential synergy has been used in most enterprises (Liu, 2006).

Previous studies focused less on the effect of OIM on media synergy as well as the media sequence (Lim et al., 2015; Kim et al., 2016), and the research findings were inconsistent. Lim et al. (2015) obtained research results which showed that there is no significant difference between different media sequences. Loda and Coleman (2005) showed that advertising-then-publicity led to stronger perceived credibility and attitudes toward a brand than publicity-then-advertising. Kim et al. (2016) argued that publicity-then-advertising yields poorer persuasiveness than advertising-then-publicity, especially under a high persuasion knowledge condition. Although these studies examined the effect of media sequence on consumer persuasion, offline media was their focus, and online media, especially OIM was taken for granted. In addition, the products selected by these scholars were different, and that may lead to the different research findings. According to the *media congruence hypothesis*, the media that best communicates a type of product information is most congruent with that type of information (Lim and Chung, 2011; Wright and Lynch, 1995). Therefore, the current study incorporates OIM into online media synergy, investigates the effects of online media sequence on consumer message acceptance and message response, and explores the moderating effects of product type sim-

ultaneously.

Why is the influence of online media sequence on consumer persuasion not fully understood? Furthermore, few studies have investigated the boundary conditions of the relationship between online media sequence and consumer persuasion. The current study fills the gap by answering a key research question: How are consumers' message acceptance and message response influenced by different types of online media sequence and different product types? To answer the question, we conducted experimental research using different types of online media sequence and different product types.

Our research offers three contributions. First, this study explores the effects of online media on consumer persuasion. According to the *cognitive structure paradigm*, we measures consumer persuasion via two important variables: message acceptance and message response (Loda and Coleman, 2015; Olson et al., 1982). This will complement the current integrated marketing research by incorporating OIM into media synergy research. Second, we investigate the effect of online media sequence (OBM-OIM vs. OIM-OBM) on consumer persuasion. This will advance our understanding of online media synergy. Third, we also examine how the interaction of online media sequence and product type affect consumer persuasion. Given the paucity of empirical tests of this intriguing issue, investigation of the interaction effect of online media sequence and product type will provide valuable implications.

We are hopeful that the current study will help researchers to deepen their understanding of the distinct effects of online media sequence for different product types (e.g., search products and experience products) on consumer persuasion (e.g., message acceptance and message response). Our goal is to uncover the influencing mechanisms about how consumers handle message acceptance and message response when they receive information stimuli with different online media sequencse for different product types. We also believe that the results of this study will have valuable implications for marketers by providing practical strategies on online integrated marketing communications and online media sequential communications.

2. RESEARCH BACKGROUND

2.1. Sequential synergy

Schultz (2006) introduced the concept of *media synergy* and stated that integrated marketing communications can result in a synergistic effect. Media synergy may be found in two types of media consumption: one is *simultaneous synergy* and the other one is *sequential synergy*. Schultz (2006) advocated simultaneous exposure of media is the main source of synergy. The research results show that more than 80% of subjects engage in simultaneous media consumption (web, TV, magazine, newspaper, and radio). By contrast, Enoch and Johnson (2010) noted that sequential exposure is more important than simultaneous exposure. By applying Nielsen panel data in their study, they found that simultaneous exposure only explains a small part of the gross increase in media use.

Studies on multitasking indicate that consumers process messages from multiple information sources (Brasel and Gips, 2011; Pilotta and Schultz, 2005; Voorveld, 2011), For example, consumers browse websites while listening the radio; they browse websites and watch TV at the same time too. Previous studies show that simultaneously using multiple media to process information may distract the consumers' attention, and further attenuate the effectiveness of the persuasion person that is intended (Angell et al., 2016; Kazakova et al., 2016). Thus, the effectiveness of multitasking may be negative: combining effects of multiple media may be less than the sum of the effects of single media.

The existence of sequential synergy is reasonable. For consumers, it is common for them to acquire information from different media. For instance, consumers become interested after they have seen advertising in a bus, and then they may search for brand-related information. Consumers may have exposure to an online banner, which motivates them to talk with other consumers about a brand or product (Lim et al., 2015; Voorveld et al., 2012). For enterprises though, it is difficult to release information on different media at the same time. This is due to the difficulties of managing the process when an emergency occurs related to the multiple media, and managers cannot determine the source. Whether the traditional commercial environment or new online environment, sequential communications strategy has been used in most of enterprises (Liu, 2006).

2.2. Persuasive effects of sequential synergy

The *integrated information response model* (IIRM) compares consumers' responses to advertising and trial using expectation-value theory (Fishbein and Ajzen, 1975). According to IIRM, advertising is known to be a vested-interest source, and consumers often discount the information from it. They also form weak brand beliefs, thus leading to a weak attitude toward the brand (Smith and Swinyard, 1982). In subsequent studies, Finn (1984) proposed the single hierarchy model that including an *evaluation behavior stage* that defines behaviors associated with the development of strong brand beliefs and high message acceptance. They include existing information through external searches (actual trial, vicarious trial, friends, etc.). The IIRM and single hierarchy models give a direction for exploring the interaction of advertising and external searches: that the media sequence can systematically influence consumer behavior (Loda and Coleman, 2005). Smith (1993) indicated that advertising can lessen the negative effects of an unfavorable trial experience on brand evaluation, especially when the ad is processed first. Kim et al. (2010) also showed that advertising coupled with positive publicity induces confirmation effects regardless of sequence and attribute consistency, whereas negative publicity combined with advertising mostly produces contrasting effects.

The cognitive structure paradigm is used to explain consumer persuasion of media communications (Olson and Dover, 1982). The *cognitive structure paradigm* focuses on the effects of a media communication on several related cognitive structure variables, including beliefs, attitude, and behavioral intentions. Combining it and *expectation-value theory*, Smith and Swinyard (1982) measured message acceptance and message response as consumer persuasiveness for acquiring media commu-

nications. In subsequent studies, message acceptance and message response are used to measure consumer persuasion of media communications. Loda and Coleman (2005) showed that advertising-then-publicity resulted in stronger message acceptance and message response than publicity-then-advertising. Dong et al. (2017) used perceived credibility and message strength to measure message acceptance. *Perceived credibility* refers to the extent of credible evaluation of advertising claims (Darley and Smith, 1993). *Message strength* refers to the extent of overall evaluation of persuasive effects of advertising claims (Areni, 2003). Also, Dong et al. (2017) used attitude toward a brand and purchase intention to measure message response. *Attitude toward a brand* refers to the extent of good or bad evaluation of the brand (Smith, 1993). Purchase intention refers to likelihood or probability of choosing the brand (Smith, 1993).

2.3. OBM-OIM/OIM-OBM

The main differences between broadcast media and interactive media are as follows: First, broadcast media is a one-to-many medium, such that awareness is primarily achieved by obtaining a wide audience reach (Taylor et al., 2013), whereas interactive media is characterized by one-to-one or many-to-many in-depth interactions (Fischer and Reuber, 2011). Second, broadcast media is controlled by enterprises or advertisers, whose content represents persuasion attempts (Kim et al., 2016). By contrast, the main form of interactive media is WOM, which is initiated by consumers. OIM is distinguished from OBM by two salient features. First, the main form of OIM *is electronic word of mouth* (eWOM) which has higher credibility than OBM (Godes and Mayzlin, 2004). Second, given the development of social media, eWOM has higher accessibility and availability (Liu, 2006).

OIM is relative to OBM with two notable differences between them: information sources and interactive features (Dong et al., 2017). In terms of information sources, the majority of OBM is initiated by a company, while OIM is sponsored by a company, with most initiated by consumers or third parties. This study focuses on the latter's OIM. In terms of interactive features, the OBM is mainly one-way communication of information where there is no interaction between consumers and information sources, while consumers in OIM have substantive interaction or potential interaction with different information sources (Rau et al., 2008). eWOM is mainly the content and form of OIM.

There are two difference between OBM-OIM and OIM-OBM. First, in terms of primacy effects, OIM is what consumers user to describe their own experiences. Consumers acquire OIM first, and they will achieve more source and message credibility from third-party communication (Haugtvedt and Wegener, 1994). Second, consumers reading eWOM may form a potential interaction, resulting in the process of agent learning (Lee and McKendree, 1999), and an increase in perceived interactivity leads to stronger feelings of identification with as company, which also boost brand equity (Eberle et al., 2013). The effects of OBM-OIM and OIM-OBM on consumer persuasion depend on consumers' need for cognition (Haugtvedt and Wegener, 1994). When consumers have a higher need for cognition, message elaboration will be higher, and their final attitudes will show primacy

effects. Under conditions fostering low message elaboration though, consumers' final attitudes will show recency effects (Kupor and Tormala, 2015).

2.4.The moderating role of product type

Previous studies have shown that product and consumer factors moderate the relations between online media sequence and consumer persuasion (Ghosh Chowdhury et al., 2015; Tsao and Hsieh, 2015). We suggest that product type can moderate consumers' need for cognition about OBM-OIM versus OIM-OBM. When it is used as a source for communicating brand information. Based on the balance between search and experience attributes, Nelson (1981) divides products into two categories: search products and experience products. *Search products* are products that consumers can obtain sufficient product attribute information prior to purchase (Zeitham and Bitner, 2000). *Experience products* are products that consumers cannot obtain product attribute information until after the product is purchased and used (Brush and Artz, 1999). Consumers can easily and confidently get search attribute information from marketers (Hsieh et al., 2005). In the case of experience goods, it is difficult for consumers to obtain the experience attribute information of the products before purchasing or using them, and obtaining information through second-hand and credible information sources such as eWOM can be used as an important way to help them evaluate experience attributes (Huang et al., 2013; Smith and Vogt, 1995).

According to the media congruence hypothesis, under which the media that best communicates a type of product information is most congruent with that type of information (Wright and Lynch, 1995). Product trials are consistent with communication of experience attribute information, and advertising is consistent with communication of search attribute information (Lim and Chung, 2011). Media congruence leads to more media attention by consumers, which is a factor for ability and motivation (Petty and Cacioppo, 1986), and that leads to stronger subsequent message response (Dahlén, 2005). When consumers give a brand of more attention in the media, the message elaboration will be higher, and their final attitudes will show primacy effects. If consumers give less attention to the media, then message elaboration will be lower, and their final attitudes will show primacy effects (Haugtvedt and Wegener, 1994).

Overall, previous research suggests that the effects of online media sequence on how much consumers are persuaded about a brand or a product depends on their message elaboration. Under conditions fostering high message elaboration, final attitudes will show primacy effects. Under conditions fostering low message elaboration, final attitudes will show recency effects. However, no study has directly tested the moderating role of product type on the effect of communicating information through OBM-OIM versus OIM-OBM. In the following sections, we outline a conceptual framework and present a set of research hypotheses regarding the interaction effects between product type and online media sequence.

3. CONCEPTUAL FRAMEWORK AND HYPOTHESES

3.1. Online media sequence and message response

Overall, previous research shows that the effects of online media sequence on consumer persuasion depends on consumers' message elaboration. However, building on empirical evidence that has shown that product and consumer factors can moderate the relationship between online media sequence and consumer persuasion (Ghosh Chowdhury et al., 2015; Tsao and Hsieh, 2015), we examines whether product type moderates the effect of communicating brand information through OBM-OIM versus OIM-OBM. In contrast with past research (Kim et al., 2016; Lim et al., 2015; Loda and Coleman, 2005), we argue that search products do not necessarily benefit from OIM-OBM, as opposed to OBM-OIM. Rather, we suggest that the online media sequence should be congruent with the product type.

The media congruence hypothesis suggests that the media that best communicates a type of product information is the one congruent with that type of information. OBM is congruent with search attribute communication, for example, while OIM is congruent with experience attribute communication (Lim and Chung, 2011). When experience attributes are conveyed by OIM first rather than by OBM, they gain more attention (Roy and Naidoo, 2017), and that deepens consumers' message elaboration for communication of OIM. Belief strength and belief confidence for important experience attributes will be greater after exposure to OIM-OBM than OBM-OIM. According to expectation value theory (Fishbein and Ajzen, 1975), brand attitude is formed through the summation of expected value resulting from attributes associated with the brand. So then, OIM-OBM generates more positive brand attitude and purchase intention than OIM-OBM for experience products.

When search attributes are conveyed by OBM first rather than by OIM, they gain more attention (Jain and Posavac, 2001), and that deepens consumers' message elaboration for communication of OBM. Belief strength and belief confidence for important search attributes will be greater after exposure to OBM-OIM than OIM-OBM. Thus, OIM-OBM generates more positive brand attitude and purchase intention than OIM-OBM for experience products. If information on the experience products is conveyed via OBM first, then they will not gain much attention from consumers, and there will not be a high level of message elaboration that is formed. Thus, in comparison with the OBM-OIM sequence, the mean values of belief strength and belief confidence of OIM-OBM will be stronger. According to expectation value theory (Fishbein and Ajzen, 1975), brand attitude is formed through the summation of expected value resulting from attributes associated with the brand. Consumers will achieve stronger and more confident beliefs after exposure via OIM-OBM rather than by OBM-OIM, where they will obtain a stronger attitude and purchase intention for the brand. So the following interaction effects between online media sequence and product type before communication are proposed:

- **Hypothesis 1 (The Online Media Sequence and Product Type Interaction on Brand At-**

titude Hypothesis). *There is an interaction effect between online media sequence and product type on brand attitude, such that (a) OBM-OIM generates more positive brand attitude than OIM-OBM for search products and (b) OIM-OBM generates more positive brand attitude than OIM-OBM for experience products.*

- **Hypothesis 2 (The Online Media Sequence and Product Type Interaction Effect on Purchase Intention Hypothesis).** *There is an interaction effect between online media sequence and product type on purchase intention, such that (a) OBM-OIM generates more positive purchase intention than OIM-OBM for search products and (b) OIM-OBM generates more positive purchase intention than OIM-OBM for experience products.*

As the Online Media Sequence and Product Type Interaction on Brand Attitude Hypothesis (H1) and the Online Media Sequence and Product Type Interaction Effect on Purchase Intention Hypothesis (H2) theorized, message acceptance (message strength and perceived message credibility) can explain the interaction effects between online media sequence and product type. The conceptual model is depicted in Figure 1.

INSERT FIGURE 1 ABOUT HERE

3.2. Online media sequence and message acceptance

Consumer message acceptance mainly consists of message strength and perceived message credibility (Dong et al., 2017; Loda and Coleman, 2005). Message strength is an integral aspect of persuasion (Holbert et al., 2013). Strong message are more persuasive in that they elicit more favorable cognitive responses than weak messages (von Borgstede et al., 2014). The strength of messages was manipulated by the number of the arguments supporting the main claim in prior research (Dursun and TümerKabadayi, 2013). Search products conveyed by OBM first rather than by OIM first tend to gain more attention. Media congruence leads to more consumer media attention, which is a factor for ability and motivation (Petty and Cacioppo, 1986), and that leads to stronger subsequent message elaboration (Cline and Kellaris, 2007). Consumers will have more interaction in ubsequent media communication, and message strength will be higher after exposure via OBM-OIM rather than OIM-OBM. Experience products conveyed by OIM first rather than by OBM will gain more attention, and consumers will make have more interaction in OIM. In the subsequent OBM, consumers acquire a similar message one more time, and thus the number of the arguments supporting the main claim will be more. However, if experience product information is conveyed by OBM first rather than by OIM, consumers will ignore or skip the message (Yoo, 2008). In comparison, with the sequence of OBM-OIM, the mean values of message strength of OIM-OBM will be higher. Therefore, we propose that message strength explains the interaction effect between online media sequence and product type:

- **Hypothesis 3 (The Message Strength Interaction Effect Mediation Hypothesis).** *Message strength mediates the interaction effect in Hypotheses 1 and 2.*

Although several factors influence message acceptance, a particularly important variable for advertising response models is the information source (Smith and Swinyard, 1982). Information from OIM is perceived as more credible and objective, and less persuasive knowledge than that from OBM

(Kim et al., 2016). Previous studies have shown that the credibility of positive eWOM is stronger for experience products than it is for search products (Lim and Chung, 2011; Tsao and Hsieh, 2015). Based on the media congruence hypothesis and primacy effects theory, for experience products, information conveyed by initial OIM will be perceived as more credible. Thus the OIM-OBM sequence will have a stronger effect on perceived message credibility than that of OBM-OIM. Travelling as a research object was used to further exploring the influence of media sequence on perceived credibility, and the research results showed that publicity then advertising had a stronger effect on perceived credibility than advertising then publicity (Loda and Coleman, 2005). However, if search product information is conveyed by OIM first rather than by OBM, consumers will have less of a sense of interactivity (Eberle et al., 2013). Perceived interactivity has a positive effect on message credibility. Thus, in comparison with the sequence of OIM-OBM, the mean values of message strength of OBM-OIM will be stronger. Therefore, we propose that perceived message credibility explains the interaction effect between online media sequence and product type:

- **Hypothesis 4 (The Perceived Message Credibility Interaction Effect Mediation Hypothesis).** *Perceived message credibility mediates the interaction effect in Hypotheses 1 and 2.*

4. METHODS

4.1. Online media sequence

OBM and OIM were designed by creating information stimuli related to online advertisement and eWOM. OIM is similar to OBM with two notable differences between them: information sources and interactive features. In terms of information sources, the majority of OBM is initiated by the company, while most OIM are initiated by consumers or third-parties. In terms of interactive features, OBM is mainly one-way communication of information where there is no interaction between consumers and information sources, while consumers in OIM have substantive interaction or potential interaction with information sources (Rau et al., 2008).

eWOM is mainly the content and form of OIM. We offered arguments and visuals for the two information stimuli to ensure that the messages were identical, except for the information source (the company vs. the consumers) and interactive features (no interaction vs. potential interaction). The names of virtual brands, fictitious online advertisements, and eWOM corresponding to each product were produced. The fictitious brand was created to avoid threats of biased responses from the subjects' past brand experiences. Three candidate virtual brands for each product were produced through a focus group, and then the group members voted for the candidates based on acceptability and feasibility. Two virtual brands were formed in the product categories.

Based on previous studies (Smith and Vogt, 1995; Tsao and Hsieh, 2015) and the focus group's discussion results, we designed fictitious ads and eWOM. A professional graphic artist designed the ads, which aimed to create positive evaluations of the ads' execution elements. The con-

tents included layout, multiple color format, interesting typefaces, sizes, and a banner headline. Based on Smith and Vogt's (1995) WOM design procedure, eWOM with product attributes was designed to form positive consumers' evaluations of the product's appeal. No substantive interaction occurred during this process. Past research has shown that eWOM is the message that other consumers use to describe their own experiences, and consumers may interact with information sources (McKendree et al., 1998). In the process of research and design, the researchers considered the possible interaction between the consumers and the experimenters. However, because the content of interaction was not able to be controlled, we chose the form of eWOM to experiment with to minimize such problems.

4.2. Pretest

The objective of the pretest was to distinguish between search and experience product usage in our experiment. At the beginning, we identified a list of candidate search products and experience products for the experiment. Then then one focus group with 12 people selected four preliminary candidate products according to the classification criteria proposed by Mudambi and Schuff (2010). The candidate products included two search products (smart phones and digital cameras) and two experience products (clothing and shoes). Next, five items were used to measure each product on a 7-point Likert scale. Three of the items evaluated experience quality ("It is important for me to see the product to make a judgment of the product," "It is important for me to touch the product to make a judgment of the product," and "It is important for me to listen to the product to make a judgment of the product") and the other two measured search quality ("I can adequately assess this product by using only information provided by the retailers or manufacturers about the product's attributes and features," and "I can evaluate the quality of this product simply by reading product attribute information."). 34 subjects who did not participate in the main experiment were recruited to participate in the evaluation process. Smart phones ($M_{\text{experience quality}} = 5.03$, $M_{\text{search quality}} = 5.42$, $p < 0.01$) were categorized as a search product. Clothing ($M_{\text{experience quality}} = 5.94$, $M_{\text{search quality}} = 4.15$, $p < 0.001$) was categorized as experience product. Thus, in our main experiment, we used smart phones to represent the search product and clothing for the experience product.

Then, a pretest was conducted to determine which attributes were salient to consumers when choosing smart phone or clothing. Following the free-elicitation procedure of Smith and Vogt (1995), 12 respondents corresponding to each product were asked to list the attributes they considered important when selecting a smart phone or a piece of clothing. The product attributes of smart phones that were most frequently mentioned were functions (battery, charge, fingerprint identification, resolution, camera functions, and memory) and product attributes (appearance, color, and size). The product attributes of clothing that were most frequently mentioned were product attributes (materials, style, and size) and affiliated conditions (origin, fashion, and collocation).

4.3. Design, subjects, and procedure

The current study used a 2 (online media sequence: OBM-OIM and OIM-OBM) × 2 (product

type: search and experience) between-subject design. Each subject was randomly designated to receive one of the four information stimuli for the experiment. To control the interference from eWOM valence on the outcomes, we used positive phrasing for all the eWOM content.

Subjects were recruited from a major university in central China and paid ¥20 (~US$3) for their participations. A total of 180 subjects was randomly assigned to the four treatment groups, each with 45 subjects in the formal experiment. When subjects sat in the computer room, they were asked to read the instructions carefully. The subjects were informed that the survey involved a new brand that was about to be launched in the Chinese market. We randomly presented one of the four online information stimuli (OBM-OIM on search product, OIM-OBM on search product, OBM-OIM on experience product, OIM-OBM on experience product) to each of the subjects. After viewing the information stimuli, the subjects were asked to answer a set of questions about the contents of the information stimuli. It took approximate 10 minutes to complete the experiment.

College students are main users of online media, especially OIM, such as SNSs, microblogs, and online communities, etc. (Chen, 2017). The average age of the subjects was 20.4 years, 52% were male, and the average amount of time they spent online was 5.68 hours per day. In their daily lives, most of them received information from multiple information sources (e.g., online banners, online videos, online communities, and online SNSs).

4.4. Measurement

We retained the product type scale (Cronbach's α = .848) from the pretest in the main study. In accordance with pasts research (e.g., Dong et al., 2017; Loda and Coleman, 2005), we measured perceived message credibility with three items. Subjects were asked to indicate their level of agreement with the following statements on a 7-point Likert scale: In the materials you just read, (1) "How truthful do you think the claims were?" (2) "How accurate do you think the claims were?" and (3) "How credible do you think the claims were?" (Cronbach's α = .883). We captured message strength with three semantic differential items. Subjects were asked to indicate their level of agreement with the following statements on a 7-point semantic differential: I think the message/arguments in the materials were, "Easy to understand/not easy to understand," "Strong reasons/weak reasons," and "Clear/unclear" (Cronbach's α = .870). We measured brand attitude with three semantic differential items. Subjects were asked to indicate their level of agreement with the following statements on a 7-point semantic differential: "Positive/negative," "Good/bad," and "Interesting/uninteresting" (Cronbach's α = .912). We captured purchase intention with three items. Subjects were asked to indicate their level of agreement with the following statements on a 7-point Likert scale: (1) "The likelihood of that I will buy this product," (2) "The probability that I will consider buying this product," and (3) "My willingness to buy this product" (Cronbach's α = .851).

To avoid priming and demand effects, we measured all mediators after the dependent measure. Finally, to control for the influence of subjects' personal involvement on the product category, we

measured product category involvement, as developed by Koschate-Fischer et al. (2014). Subjects were asked to indicate their level of agreement with the following statements on a 7-point Likert scale: ‘‘Category X is very important to me,’’ and ‘‘Category X interests me a lot’’ (Cronbach’s α = .841).

5. RESULTS

5.1. Manipulation checks

An analysis of variance (ANOVA) was conducted to assess the manipulation of product type.The results showed that the manipulation check was successful. As in the pretest, we considered the smart phone as search product and clothing as experience product. The smart phone ($M_{\text{experience quality}}$= 4.89, $M_{\text{search quality}}$ = 5.61, $p < 0.001$) is best categorized as search product. Clothing ($M_{\text{experience quality}}$ = 5.92, $M_{\text{search quality}}$ = 4.07, $p < 0.001$) is best categorized as an experience product, with M = mean.

5.2. Interaction effects

A two-way, between-groups ANOVA was conducted to reveal the main effects of either online media sequence or product type on the mediating variables or the dependent variables. The results showed that no significant main effects were present. Consistent with our predictions, the analysis indicated a significant interaction effect between online media sequence and product type on brand attitude and purchase intention. This indicated that there was a significant difference in the effect of online media sequence for search product versus experience product. Investigation of the mean difference score between OBM-OIM and OIM-OBM for the two types of product showed the anticipated directions for the two groups as proposed in the two Online Media Sequence and Product Type Interaction on Brand Attitude Hypotheses (H1a and H1b). In the condition with the search product, OBM-OIM had more influence on brand attitude than OIM-OBM did ($M_{\text{OBM-OIM}}$ = 5.111, $M_{\text{OIM-OBM}}$ = 4.930; $F(1,88) = 4.373$, $p < 0.05$, as shown in Figure 2), where OIM-OBM had more influence on brand attitude than OBM-OIM for the condition of experience product ($M_{\text{OBM-OIM}}$ = 4.459, $M_{\text{OIM-OBM}}$ = 5.237; $F(1,88) = 20.183$, $p < 0.001$). Also, the two Online Media Sequence and Product Type Interaction Effect on Purchase Intention Hypothesis (H2a and H2b) were supported. For search products, OBM-OIM had more influence on purchase intention than OIM-OBM did ($M_{\text{OBM-OIM}}$ = 5.341, $M_{\text{OIM-OBM}}$ = 4.941; $F(1,88) = 7.060$, $p < 0.01$, as shown in Figure 3), where OIM-OBM has more influence on purchase intention than OBM-OIM for the experience products ($M_{\text{OBM-OIM}}$ = 4.385, $M_{\text{OIM-OBM}}$ = 5.312; $F(1,88) = 26.317$, $p < 0.001$).

5.3. Mediated moderation effects

As predicted, two mediators (message strength and perceived message credibility) are able to explain the interaction effects between online media sequence and product type that we obtained. Table 1 shows the means and standard deviations of the dependent variables and mediators by condition.

INSERT TABLE 1 ABOUT HERE

The two-way ANOVA indicated that there was an interaction effect between online media se-

quence and product type on message strength ($F(1,88) = 16.95$, $p < 0.001$), and perceived message credibility ($F(1,88) = 10.67$, $p < 0.001$). This indicates that there was a significant difference in the effect of online media sequence for search products versus experience products. The interaction effects are displayed in Figures 4 and 5.

Preacher and Hayes's (2008) INDIRECT macro for SPSS was employed to examine the Message Strength Interaction Effect Mediation Hypothesis (H3) and the Perceived Message Credibility Interaction Effect Mediation Hypothesis (H4). Because bootstrapping does not rely on the assumption of normality of the sampling distribution of the indirect effect (Preacher and Hayes, 2008), it is a preferred method for testing mediation. Also, non-parametric resampling procedures for testing mediated moderation hypotheses can generate bootstrap confidence intervals.

When brand attitude served as the dependent variable, and message strength and perceived message credibility served as mediators, the procedure was conducted. Because none of the confidence intervals produced 0s, the bootstrapping results indicated that message strength (95% CI -.387 to -.014), and perceived message credibility (95% CI -.622 to -.110) all mediated the interaction effect. Thus, the results support Message Strength Interaction Effect Mediation Hypothesis (H3) and the Perceived Message Credibility Interaction Effect Mediation Hypothesis (H4). The results of the bootstrap confidence intervals for multiple mediation scan shown in Table 2.

INSERT TABLE 2 ABOUT HERE

The unique abilities of each mediator to account for the interaction effect on brand attitude can is also shown in the table (Preacher and Hayes 2008). Contrast analyses indicate that perceived message credibility was a stronger mediator than message strength (95% CI -.412 to -.011).

When purchase intention served as the dependent variable, and message strength and perceived message credibility served as mediators, the procedure was conducted. Because none of the confidence intervals produced contained 0, the bootstrapping results indicate that message strength (95% CI -.577 to -.035), and perceived message credibility (95% CI -.415 to -.097) all mediated the interaction effect. Thus, the results support the Message Strength Interaction Effect Mediation Hypothesis (H3) and the Perceived Message Credibility Interaction Effect Mediation Hypothesis (H4). Table 3 reports the bootstrap confidence intervals for multiple mediation, and the results of the bootstrap confidence intervals for multiple mediation are shown too.

INSERT TABLE 3 ABOUT HERE

The unique abilities of each mediator to account for the interaction effect on purchase intention is also shown in the table. Contrast analysis indicated that message strength was a stronger mediator than perceived message credibility (95 % CI -0.529 to -0.075).

6. DISCUSSION

Though the online media sequence (OBM-OIM vs. OIM-OBM) may have an effect on con-

sumer persuasion (Loda and Coleman, 2005), surprisingly little research has investigated the underlying influencing mechanism. Previous studies have offered little guidance on how the online media sequence should be designed for maximum positive impact. The current study focused on online media sequential effects and the moderating role of product type. It contributes new knowledge on how enterprises can choose the right online media sequence by matching it to a suitable product type. Existing studies on effects of media sequence on consumer persuasion have shown inconsistent findings, either supporting one media sequence as superior to the other or showing no difference at all (Kim et al., 2016; Lim et al., 2015; Loda and Coleman, 2005). Because several factors, such as product or consumer factors, can moderate the relative effectiveness of OBM-OIM versus OIM-OBM, this study aimed to examine the moderating role of product type.

Our research results show that the communication effects of online media sequence design may be dependent on whether the product is a search product or an experience product. In comparison with previous studies (Loda and Coleman, 2005), we expected that the incongruence between OIM-OBM and search product would lead to lower message acceptance (message strength and perceived message credibility) and message response (brand attitude and purchase intention). Thus, we expected that product type would moderate the effect of online media sequence on consumer persuasion. The experimental results confirmed that the effect of online media sequence on consumer persuasion did indeed interact with product type. As we hypothesized, OBM-OIM generated more positive responses for search products, whereas OIM-OBM worked better for experience products. The results of further mediation analysis showed that these effects can be explained by two mechanisms: message strength and perceived message credibility.

Ourresearch findings are different from those of Loda and Coleman (2005) regarding the effects of media sequence on consumer persuasion. A possible explanation may lie in the difference in type of product information stimuli. Previous studies have shown that primacy effects occurred for consumers' elaboration related to the first information stimuli (Kupor and Tormala, 2015). According to the media congruence hypothesis, the media that best communicates a type of product information is most congruent with that type of information (Wright and Lynch, 1995). Media congruence leads to greater media attention, and subsequent message elaboration. Travelling as a research object was used to further exploring the influence of media sequence on perceived message credibility, and the research results showed that publicity, and then advertising had a stronger effect on perceived credibility than advertising, and then publicity did (Loda and Coleman, 2005). Although the current research results are inconsistent with the findings of Loda and Coleman (2005), they are not really contradictory. The current study further confirms the moderating role of product type on the relationship between online media sequence and consumer persuasion. In addition, although media sequence were taken into consideration in Lim et al.'s (2015) study, the feature differences between the different media were not taken into account. This study supplements and deepens the above research. Also, our study

takes into account the sequence of different media with feature differences, and considers the moderating factors in the relationship between media sequence and consumer persuasion.

6.1. Theoretical implications

The current study makes three primary contributions to the media synergy and online integrated marketing communications literature. First, most of the previous research on media sequence has focused on offline media (e.g., print, magazine, radio, TV) or OBM and excluded OIM. The current study investigated how the sequence of OBM and OIM influences consumer persuasion, thereby providing a complement to the existing research on media sequence and online integrated marketing communications. Previous studies seldom focused on the role of OIM in media synergy (Assael, 2011). With the popularity of OIM, that plays an important role in online marketing communications. This research results enrich the contents and scope of online marketing communications.

Furthermore, few researchers have addressed the issue of media sequence related to product type. Distinguishing search products with experience products and exploring the differentiate effect of online media sequence on consumer persuasion in different product types widens the applicability of research on the persuasiveness of online media, especially integrating OBM with OIM. Experience product information as message stimuli has often been used to conduct experiments in previous studies of media sequence (Enoch and Johnson, 2010; Kazakova et al., 2016), but the research results have not been conclusive. By classifying the products into search and experience goods, and examining the interaction effects of online media sequence and product type on message acceptance and message response, the current study enriches the media sequence literature.

Finally, the current study also extends the theories associated with the integrated information response model and the media congruence hypothesis by including the topic of persuasiveness of online media sequence in order to establish strong hypotheses, as well as the inference concerning the persuasiveness of online media sequence and product type. Although the integrated information response model provides a way of thinking about information persuasiveness, it does not address the issue of media sequence effects on consumer persuasion in particular. This study explored the impact of media sequence under different product types based on media congruence assumptions and product types. We provided findings regarding the influence of media sequence and product type on consumers with great academic support. The results of the current study demonstrate that the importance of online media sequence across different product types varies.

6.2. Practical implications

The current study has several important practical implications for media planners and integrated marketing communication marketers. First, the credibility of information sources and interaction features are important for online communication. With the emergence of various forms of OIM, user-generated content plays an important role in online communication. Consumer-to-consumer interaction has become an important tool for consumers to acquire and understand brand information.

Marketers should take advantage of the situation by effectively using OIM in online marketing communication. Via third-party information sources, marketers can obtain more consumer credibility, thereby enhancing consumer message acceptance and strengthening their positive brand attitudes.

Second, this study found that online media sequence has a significant effect on consumer persuasion. Marketers can successively use OBM and OIM to communicate with consumers due to their effectiveness on message acceptance (message strength and perceived message credibility) and message response (brand attitude and purchase intention). Marketers can consider building brand equity from the perspective of message acceptance, which serves as an intermediary mechanism for online marketing communications to consumer message responses. When conducting online marketing communications, strong arguments may provide consumers with more evidence and details to support the core product claims. Good use of third-party marketing communications can strengthen consumers' message credibility, and then enhance brand credibility and brand identification.

Third, this study also suggests that there is a need to distinguish media sequences between search products and credence products. For search products, OBM-OIM yields a stronger effect on brand attitude and purchase intention than OIM-OBM does. Thus, marketers should attract consumer attention on OBM using emerging video contents, mobile game advertising, etc. Besides, marketers can provide appropriate website design quality, online service quality, and convenient mobile payment to promote consumer purchase behavior. For experience products, in contrast, marketers should make use of OIM (SNS, online community) more effectively. They should give full air time to leverage the advantages of interactivity and objectivity of OIM, and through the implementation of these measures, consumer message credibility and brand attitude will be enhanced.

6.3. Limitations and future research

This research has some limitations. First, we examined the interaction effects of online media sequence and product type on consumer persuasion through experimental studies. However, in addition to the persuasive effects brought by online media sequence, researchers or marketers should also consider the cost of online media communications. OBM have features such as strong information exposure, brand awareness realization, but cost more in compared with other available media such as social media (Stephen and Galak, 2012). In the future research, using secondary data to analyze the effect of online media sequence will be an important contribution to media synergy study.

Second, the subjects in the current study were university students, and so are not necessarily representative of the overall population. This limits the generalizability of the conclusions with regard to consumer message acceptance and message response to online media sequences. Despite the limitation of this study, the students are still a main group for studying online communication (Fang, 2014). Future research with more another more representative sample may provide different results.

Third, online media sequence effects are affected by variables such as product type (Rosario et al., 2016), consumer knowledge (Xu and Wyer, 2010), and previous brand attitudes (Stammerjohan

et al., 2005). Hedonic products and newly-released products are more likely to generate eWOM communications than functional products. In the early stage of considering products, consumers are more uncertain, and thus are more dependent on eWOM (Huang et al., 2015). Future research should consider the interaction effects of consumer knowledge and previous brand attitudes on the appropriate online media sequence to leverage. In addition, online media features, media presentation modes, interaction levels, and interaction response times all affect online media synergy (Besharat et al., 2013). Future research should further study the effects of these variables from a quantitative perspective.

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Figure 1. The conceptual model

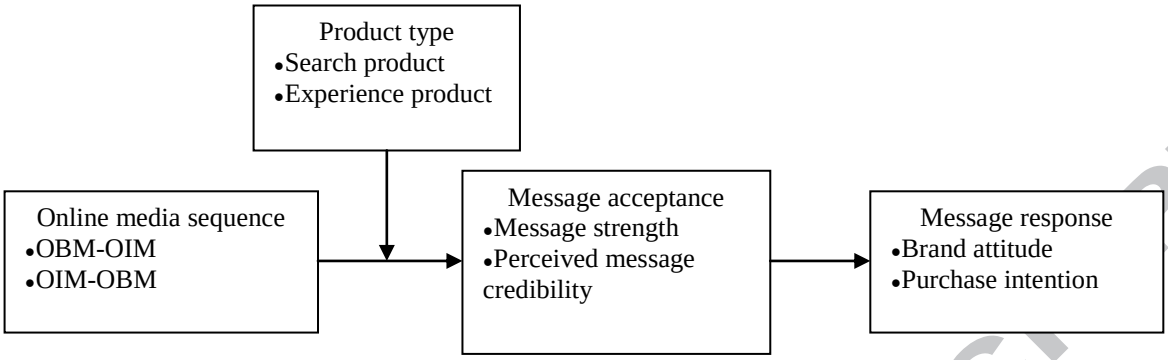

Figure 2. Interaction effect for online media sequence / product type on brand attitude

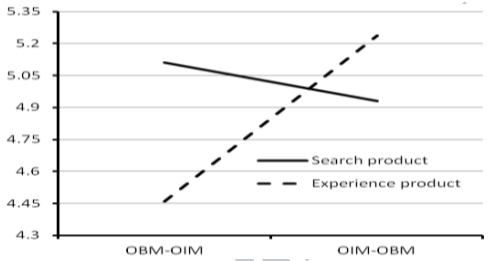

Figure 3. Interaction effect for online media sequence / product type on purchase intention

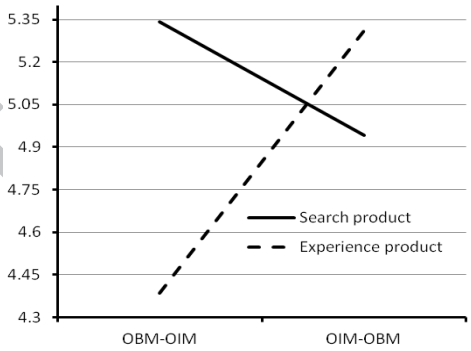

Figure 4. Interaction effect for online media sequence / product type on message strength

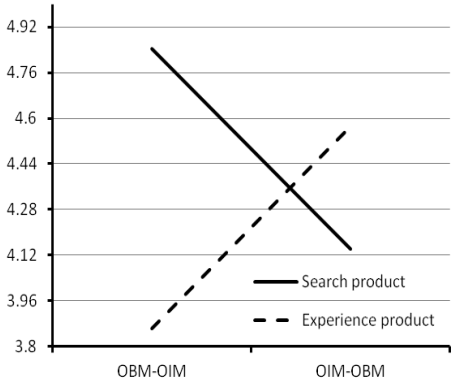

Figure 5. Interaction effect for online media sequence /product type on message credibility

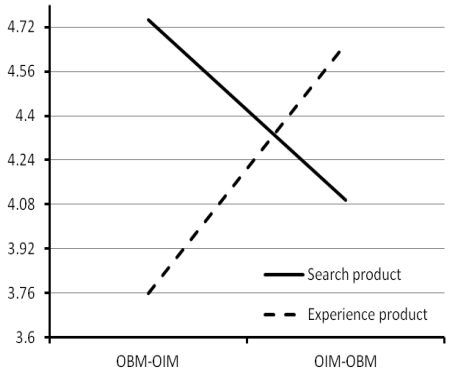

Table 1. Means and standard variances (parentheses) of the dependent and mediating variables

	Search Product		Experience product	
	OBM-OIM	**OIM-OBM**	**OBM-OIM**	**OIM-OBM**
Brand attitude	5.11 (1.422)	4.93 (1.298)	4.46 (1.225)	5.24 (1.464)
Purchase intention	5.34 (1.310)	4.94 (1.137)	4.39 (1.208)	5.31 (1.419)
Message strength	4.84 (1.186)	4.14 (1.038)	3.86 (1.167)	4.57 (1.351)
Message credibility	4.75 (1.237)	4.10 (1.304)	3.76 (1.038)	4.66 (1.407)

Table 2. Multiple mediation with contrasts

Dependent variable **Brand attitude**	**Path coefficients**			**Bootstrap results, indirect effects**		
					BCa 95 % CI	
	A	***b***	***c***	***c'***	**LL**	**UL**
Mediators						
Message strength	-.467**	.298***	-.672***	-.235	-.387	-.014
Message credibility	-.644**	.462***	-.672***	-.235	-.622	-.110
Total					-.813	-.167
Contrasts						
Message strength vs. message credibility					-.412	-.011

Notes: BCa represents bias corrected and accelerated; 3,000 bootstrap samples; CI is the confidence interval; LL is the lower limit, and UL is the upper limit. Path coefficient *A* indicates independent variable to mediators; path coefficient *b* indicates the direct effect of mediators on the dependent variables; path coefficient *c* indicates the total effect of the independent variables on the dependent variables; and c' is direct effect of independent variable on the dependent variables (controlled for mediators). * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3. Multiple mediation with contrasts

Dependent variable **Purchase intention**	**Path coefficients**			**Bootstrap results, indirect effects**		
				c'	**BCa 95 % CI**	
	a	***b***	***c***		**LL**	**UL**
Mediators						
Message strength	-.598**	.328***	-.535***	-.213	-.577	-.035
Message credibility	-.462**	.272***	-.535***	-.213	-.415	-.097
Total					-.796	-.159
Contrasts						
Message strength vs. message credibility					-.529	-.075

Interactions between online media sequences and product types affect the persuasion of consumers

For search goods, OBM-OIM yields higher message consumer acceptance and message responses.

For experience goods, OIM-OBM yields higher consumer message acceptance and message responses.

Message acceptance mediates the effect of online media sequences on message responses.